

AP3 Rec'd PCT/PTO 09 JUN 2005

The present invention also relates to the [use of an oligonucleotide having one of the nucleotide sequences recited in SEQ ID nos. 1 to 135, of an oligonucleotide whose nucleotide sequence is mutated relative to one of the nucleotide sequences recited in SEQ ID nos. 1 to 135, of an oligonucleotide that has a nucleotide sequence that is complementary to one of the nucleotide sequences recited in SEQ ID nos. 8 to 135, or to a mutated sequence thereof, of a nucleic acid molecule that comprises one of the nucleotide sequences recited in SEQ ID nos. 8 to 135, a mutated sequence thereof, or a complementary sequence thereof, or of a primer pair* of the invention [*of one of Claims 9 or 10], for the diagnosis and/or early detection of diseases caused by genital human papilloma viruses.]

The present invention also relates to the <use of an oligonucleotide having one of the nucleotide sequences recited in SEQ ID nos. 1 to 135, in particular of one of the nucleotide sequences recited in SEQ ID nos. 1 to 7, 19, 32, 41, 44, 48, 82, and 117 to 135, of an oligonucleotide whose nucleotide sequence is mutated relative to one of the nucleotide sequences recited in SEQ ID nos. 1 to 135, in particular to one of the nucleotide sequences recited in SEQ ID nos. 1 to 7, 19, 32, 41, 44, 48, 82, and 117 to 135, of an oligonucleotide that has a nucleotide sequence that is complementary to one of the nucleotide sequences recited in SEQ ID nos. 8 [sic] to 135, in particular to one of the nucleotide sequences recited in SEQ ID nos. 1 to 7, 19, 32, 41,

44, 48, 82, and 117 to 135, or a mutated sequence thereof, of a nucleic acid molecule that comprises one of the nucleotide sequences recited in SEQ ID nos. 8 to 135, in particular one of the nucleotide sequences recited in SEQ ID nos. 19, 32, 41, 44, 48, 82, and 117 to 135, a mutated sequence thereof, or a complementary sequence thereof, or of a primer pair Δ [Δ of one of Claims 9 or 10] of the invention to prepare a means for the diagnosis of diseases that are caused by genital human papilloma viruses.>

The means that is prepared may, for example, be a kit of the invention or a nucleotide array of the invention.

The present invention is explained in greater detail by the following sequence protocol, the following figures, and the following examples.

The sequence protocol is part of this description, and it contains sequences SEQ ID nos. 1 to 135.

SEQ ID no. 1 to SEQ ID no. 6 show the sequences of oligonucleotides that are suitable for use as forward primers to amplify regions of the HPV gene E1. The oligonucleotides used as forward primers having the nucleotide sequences recited in SEQ ID nos. 2 to 6 are referred to below as Loma 1, Loma 2, Loma 3, Loma 4, and Loma 5, respectively.

SEQ ID no. 7 shows the sequence of an oligonucleotide that is suitable for use as a reverse primer for amplifying regions of the HPV gene E1. The oligonucleotide that is used as the reverse primer having the ...